

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/024338

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01B31/02 C09C1/44 C09C3/12 C08K7/24 C08K3/04
C08K9/06 C08K7/02 C08K7/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01B C09C C08K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, PAJ, WPI Data, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/58909 A (GOVERNMENT OF THE US ADMINISTR) 16 August 2001 (2001-08-16)	1,8-10, 12-40
Y	page 21, line 19 - line 31 page 23, line 3 - page 24, line 30; claim 140	1-4,11
Y	----- STEVENS J L ET AL: "Sidewall amino-functionalization of single-walled carbon nanotubes through fluorination and subsequent reactions with terminal diamines" NANO LETTERS AMERICAN CHEM. SOC USA, vol. 3, no. 3, 28 January 2003 (2003-01-28), pages 331-336, XP002314112 ISSN: 1530-6984 column 1, line 1 - column 3, last line ----- -/--	1-4,11

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the International filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the International search

19 January 2005

Date of mailing of the International search report

24.05.05

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	VELASCO-SANTOS C ET AL: "Chemical functionalization of carbon nanotubes through an organosilane" NANOTECHNOLOGY IOP PUBLISHING UK, vol. 13, no. 4, 3 July 2002 (2002-07-03), pages 495-498, XP002314113 ISSN: 0957-4484 the whole document	1,8,10, 12,13, 23-40
X	US 6 203 814 B1 (OGATA NAOYA ET AL) 20 March 2001 (2001-03-20) column 7, line 1 - line 51; examples 16,17	1,8, 16-19, 23-28
P,X	SMITH J G ET AL: "Space durable polymer/carbon nanotube films for electrostatic charge mitigation" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 45, no. 3, February 2004 (2004-02), pages 825-836, XP004483666 ISSN: 0032-3861 the whole document	1,8-10, 12-14, 23-30, 34-40
X	AIZAWA M ET AL: "Silylation of multi-walled carbon nanotubes" CHEMICAL PHYSICS LETTERS ELSEVIER NETHERLANDS, vol. 368, no. 1-2, 14 January 2003 (2003-01-14), pages 121-124, XP002314114 ISSN: 0009-2614 the whole document	1,8,10, 23-28
A	CHOI K H ET AL: "Controlled deposition of carbon nanotubes on a patterned substrate" SURFACE SCIENCE ELSEVIER NETHERLANDS, vol. 462, no. 1-3, 2000, pages 195-202, XP002314115 ISSN: 0039-6028 the whole document	1
A	THOSTENSON E T ET AL: "Advances in the science and technology of carbon nanotubes and their composites: a review" COMPOSITES SCIENCE AND TECHNOLOGY, LONDON, GB, vol. 61, no. 13, October 2001 (2001-10), pages 1899-1912, XP002252197 6.1 "Processing and characterization of nanotube-based polymer composites"	1-40

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/024338

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-40

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-40

Silane-functionalized carbon nanotubes and method for making the same. Composite comprising silane-functionalized carbon nanotubes and a polymer.

2. claims: 41-67

A composite material comprising carbon nanotubes, fiber reinforcing material and a polymer. Method for preparing the same.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0158909	A	16-08-2001	AU 4146601 A	20-08-2001
			WO 0158909 A1	16-08-2001
			US 2003158351 A1	21-08-2003

US 6203814	B1	20-03-2001	AT 253193 T	15-11-2003
			AU 707522 B2	15-07-1999
			AU 4598096 A	26-06-1996
			CA 2207282 A1	13-06-1996
			DE 69532044 D1	04-12-2003
			DE 69532044 T2	08-07-2004
			EP 0796403 A1	24-09-1997
			ES 2210324 T3	01-07-2004
			JP 11502494 T	02-03-1999
			KR 263027 B1	01-08-2000
			US 2002086335 A1	04-07-2002
			WO 9618059 A1	13-06-1996
			US 6362011 B1	26-03-2002
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			US 2004202603 A1	14-10-2004
